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TWO/43/22
ORIGINAL: English
DATE: August 24, 2010

UPOV

INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS

GENEVA

TECHNICAL WORKING PARTY FOR ORNAMENTAL PLANTS AND FOREST TREES

Forty-Third Session
Cuernavaca, Morelos State, Mexico
September 20 to 24, 2010

REVISION OF DOCUMENT TGP/14:
REVISION OF EXISTING SECTIONS OF DOCUMENT TGP

Document prepared by Germany, New Zealand and by the Office of the Union

1. The Technical Committee (TC), at its forty-sixth session, held in Geneva from March 22 to 24, 2010, approved the consideration of the following items in the future revision of document TGP/14/1 (document TGP/14/2) (see document TC/46/15 "Report on the conclusions", paragraph 23):

SECTION 2: BOTANICAL TERMS: SUBSECTION 2: SHAPES AND STRUCTURES: I. SHAPE:

"1. Components of Shape"

States of expression for ratios

2. Document TGP/14/1 Draft 11 states that:

> "1.5 To ensure that the ratio length/width is clearly understood, it is recommended to use meaningful states such as "very elongated", rather than states such as "very high". To avoid confusion concerning the absolute dimensions, it is recommended to avoid the use of terms such as "narrow" and "broad" for ratio length/width, particularly where characteristics for the absolute dimensions are also included for the same plant part. The terms associated with certain length/width ratios used in the Chart for Simple Symmetric Plane Shapes are only intended to illustrate the use of ratio length/width. In the Test Guidelines, the use of terms such as "[very/moderately/slightly] elongated" and "[very/moderately/slightly] compressed" will need to be determined according to the range of expression for the characteristic concerned."

3. The Chart for Simple Symmetric Plane Shapes in Section 1.5 indicates that a typical set of states of expression could be as follows:

Characteristic: ratio length/width

State	Note
very compressed	1
moderately to very compressed	2
moderately compressed	3
slightly to moderately compressed	4
medium (slightly compressed to slightly elongated)	5
slightly to moderately elongated	6
moderately elongated	7
moderately to very elongated	8
very elongated	9

4. In the case of characteristics for which there are, for example, 9 states of expression that all correspond to elongated (or compressed), the following options for wording the characteristic might be considered:

(a) Characteristic: ratio length/width

State	Note
very weakly elongated	1
very weakly to weakly elongated	2
weakly elongated	3
weakly to moderately elongated	4
moderately elongated	5
moderately to strongly elongated	6
strongly elongated	7
strongly to very strongly elongated	8
very strongly elongated	9

(b) Characteristic: degree of elongation (or compression)

State	Note
very weak	1
very weak to weak	2
weak	3
weak to moderate	4
moderate	5
moderate to strong	6
strong	7
strong to very strong	8
very strong	9

2. “Developing Shape-Related Characteristics”

Perspective from which to observe plant shapes

5. It has been proposed that, in the revision of document TGP/14, it should be recommended that, where appropriate, an explanation for shape characteristics should provide guidance on the perspective from which to observe the shape.

Avoidance of duplication of characteristics

6. Document TGP/14/1 Draft 11, Section 2: Botanical Terms: Subsection 2: Shapes and Structures: I. SHAPE: 2 .“Developing Shape-Related Characteristics”, paragraph 2.1.1, states that:

> “Duplication of the same difference in two separate characteristics should be avoided: for example, the use of characteristics for both ratio length/width and for shape should be avoided where states of expression of the characteristic for shape relate to different length/width ratios.”

7. A further example of a duplication is when separate characteristics are included for ratio length/width, length and width, because two of those characteristics would determine the third.

Proposal by Mrs. Beate Rücker (Germany)

8. The ratio length/width (width/length) is a tool to describe the shape. The absolute measures are indications for the size. It is necessary to decide which are the most appropriate characteristics to describe those two sources of variation (shape and size), i.e. best discrimination between varieties and greatest environmental stability. The aim is to distinguish varieties with the same shape by size and with the same size by shape.

9. Experience has often shown that “width in relation to length” or “length in relation to width” is more stable than the absolute measurements of width and length, because the absolute measures are more influenced by the environment. In such cases, the ratio is better for the description of the shape.

10. If all varieties have the same shape, only one characteristic is necessary to observe the size. In such cases, consideration needs to be given to whether the length or width would be more reliable.

11. If varieties have different shapes and different sizes within the same shape, one absolute dimension (length or width) and the ratio should be used for DUS. Thus, two characteristics should be included in the Test Guidelines:

> “length” and “ratio width/length” (or “width in relation to length”)
> or
> “width” and “ratio length/width (or “length in relation to width”).

12. The inclusion of a third characteristic that is fully determined by the two other characteristics would not provide any additional information for the assessment of DUS and should be avoided.

13. If the duplication of characteristics is avoided, width in relation to length can be described with the states “narrow” to “broad” and length in relation to width with the states “short” to “long”.

14. Document TGP/8/1 Draft 15 “Trial Design and Techniques Used in the Examination of Distinctness, Uniformity and Stability”, Part II, 1. The GAIA Methodology, states the following with regard to correlation between characteristics:

> “1.3.1 Weighting of characteristics
>
> “1.3.1.1 It is important to take account of the correlation between characteristics when weighting. If two characteristics are linked (e.g. plant height including panicle; plant height excluding panicle), it is advisable to use only one of them in GAIA, to avoid double weight.”

Comments of the Technical Working Parties at their Sessions in 2010

15. At its thirty-ninth session, held in Osijek, Croatia, from May 24 to 28, 2010, the Technical Working Party for Agricultural Crops (TWA) considered document TWA/39/22 (paragraphs 1 to 14 in this document) (see document TWA/39/27 “Report”, paragraphs 68 to 70).

16. The TWA agreed that experts from Denmark, Germany and the United Kingdom should send data on characteristics for length, width and length/width ratio to Mr. Trevor Gilliland for collation. The TWA, at its fortieth session, would consider that data with a view to forming conclusions on any benefits in using all three characteristics in Test Guidelines.

17. The TWA noted that the text of TGP/8/1 Draft 15 “Trial Design and Techniques Used in the Examination of Distinctness, Uniformity and Stability”, Part II, 1. The GAIA Methodology, Section 1.3.1.1, should be amended to clarify that there is an assumption that the length of panicle is used as a characteristic.

18. The Technical Working Party on Automation and Computer Programs (TWC), at its twenty-eighth session, held in Angers, France, from June 29 to July 2, 2010, considered document TWC/28/22 (paragraphs 1 to 14 in this document) (see document TWC/28/36 “Report”, paragraphs 46 and 47).

19. The TWC agreed that the first sentence of paragraph 8 should read “The ratio length/width (width/length) is a tool to describe a component of shape.”. It also noted that any characteristics that were considered for distinctness would also need to be examined for uniformity. The TWC agreed that it should consider the results of the analysis of the data on characteristics for length, width and length/width ratio to be considered by the TWA (see paragraph 16, above), at its twenty-ninth session.

20. The Technical Working Party for Vegetables (TWV), at its forty-fourth session, held in Veliko Tarnovo, Bulgaria, from July 5 to 9, 2010, expressed concerns with regard to the proposal in document TWV/44/22 (paragraphs 1 to 14 in this document) that, if varieties have different shapes and different sizes within the same shape, only one absolute dimension (length or width) and the ratio should be used for DUS. In the first instance, it was noted that both length and width would need to be recorded in order to derive the ratio length/width. It also considered that it was often useful to have a separate description for length, width and

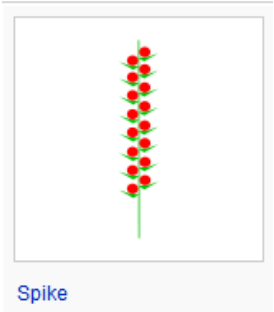
ratio length/width. With regard to concerns about duplication of characteristics, it was noted that there was a suitable warning in relation to GAIA in document TGP/8/1 Draft 15, Part II, 1. The GAIA Methodology, Section 1.3.1 Weighting of characteristics. It did not anticipate problems for DUS examiners making decisions on DUS where the characteristics length, width and ratio length/width were considered separately and noted that there were correlations between other types of characteristics (see document TWV/44/34 "Report", paragraphs 59 and 60).

SECTION 2: BOTANICAL TERMS: SUBSECTION 2: SHAPES AND STRUCTURES: II. STRUCTURE: SECTION 2.4

Term to cover spike / branch

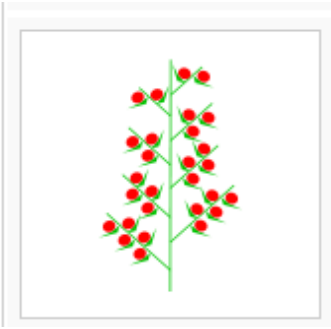
21. Document TGP/14/1 Draft 11, Section 2: Botanical Terms: Subsection 2: Shapes and Structures: II. Structure: Section 2.4, provides the following illustrations related to "Spike"

"2.4.1 Simple inflorescences […]



spike

"2.4.2 Compound inflorescences […]



compound spike

"Other

"The family *Asteraceae* is characterised by a highly specialized head technically called a calathid (but usually referred to as 'capitulum' or 'head'). The family *Poaceae* has a peculiar inflorescence of small spikes (spikelets) organized in panicles or spikes that are usually simply and improperly referred to as spike and panicle. […]"

22. The following definition of “spike” is provided in document TGP/14/1 Draft 11: Section 2: Botanical Terms: Subsection 2: Shapes and Structures: III. DEFINITIONS FOR SHAPE AND STRUCTURE TERMS:

Spike	a type of raceme with flowers that do not have a pedicel

23. The term “ spike is also referred to in the following definitions:

Catkin (ament)	A catkin or ament is a scaly, generally drooping spike or raceme. Cymose or other complex inflorescences that are superficially similar are also generally called thus.
Spadix	a spike of flowers densely arranged around it, enclosed or accompanied by a highly specialized bract called a spathe. It is characteristic of the Araceae family.

24. Mr. Chris Barnaby (New Zealand) proposes that the definition of “spike” be amended to:

Spike	an indeterminate inflorescence with sessile flowers on an unbranched axis. The length of a spike and of the peduncle can vary greatly and depending on the species can be handled as a single characteristic or split into more than one characteristic.

25. In making that proposal, Mr. Barnaby explained that a flowering branch is not necessarily a spike. A flowering branch is a lateral branch, division of the floral axis. Each branch can have an inflorescence or single flower(s).

SECTION 3 “STATISTICAL TERMS”

26. The TC agreed that any further terms that are added to TGP/8 should be included in a revision of document TGP/14 and further agreed that statistical terms not used in adopted UPOV documents should be deleted from document TGP/14 as a part of any revision.

[End of document]